AMENDMENTS TO THE SPECIFICATION:

Please amend page 1, lines 5-26, as follows:

Computer-controlled infusion pumps, the delivery functions of which are determined by means of a pharmacokinetic model, are known according to the prior art by the keyword "TCI" (= Target Controlled Infusion) and are commercially available. The main application field of TCI is the control of intravenously administered narcotics (for example propofol, marketed as Diprifusor™ by AstraZeneca (Product information "Diprifusor™: Target Controlled Infusion (TCI) in anaesthetic practice", AstraZeneca Anaesthesia, New Edition (1998)). A disadvantage of these known methods is that the pharmacokinetic model is a three-compartment model fitted to experimental plasma data. With such a "black-box" method, there is no opportunity for the patient's individual physiological factors to be taken into account in the pharmacokinetic model. In contrast to this, physiology-based PK/PD models such as PK-Sim® developed by Bayer Technology Services GmbH (~~www.PK-Sim.com;~~ S. Willmann, J. Lippert, M. Sevestre, J. Solodenko, F. Fois, W. Schmitt: "PK-Sim®: a physiologically based pharmacokinetic 'whole-body' model", *Biosilico* **1**, 121-124 (2003)), makes it possible to describe the influence of individual physiological and anatomical parameters such as organ size and composition, blood flow rates, etc. on the pharmacokinetic behavior of medicaments as a function of time (for example DE App. No. 10160270 and DE App. No. 10345836). These physiological and anatomical parameters can in turn be attributed to a few easily measurable quantities such as body weight and body mass index. DE App. No. 10345837 furthermore describes the way in which biochemical and genetic information, for example expression data of metabolically active enzymes or active transporters, can also be employed in order to determine a dose individually adapted to the patient. These systems are pure simulation models, however, which do not allow direct support of an application to the patient or clinical applications.